Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (canceled)

2.   (previously presented): The system according to claim 17, wherein the scan module is structured to perform block mode scanning.

3.   (currently amended): The system according to claim 17, wherein the graphic primitive is a triangle, and wherein the representative values are at least one edge function of the triangle and slope values for an x and y position at least one vertex of the triangle.

4.   (currently amended): The system according to claim 17, wherein the graphic primitive is a triangle, and wherein the representative values are at least one edge function of a longest side of the triangle and slope values for an x and y position at least one vertex of the triangle.

5.   (canceled)

6.   (currently amended):   A system for traversing and rendering a graphic primitive, comprising:

a setup engine having an output that outputs representative values of [[a]]the graphic primitive including x and y slope data;

a raster engine that receives the representative values of the graphic primitive and forms therefrom representative pixels, the raster engine having at least a scan module that scans only pixels within the graphic primitive and assigns data values to each of the pixels and a look-ahead module that identifies pixels that are inside of the graphic primitive; and

wherein the scan module includes:

first and second registers for storing the x and y slope data, [[respectively]]respectively, for a predetermined current pixel in the [[triangle,]]graphic primitive;

a first multiplexer having inputs connected to outputs of the first and second registers, and having an output;

an adder having first and second inputs and having an output, the first input of the adder [[being]]connected to the output of the first multiplexer;

a third register for receiving a characteristic value for the predetermined current pixel, the third register having an input and an output;

a second multiplexer having first and second inputs and an output, the first input of the second multiplexer connected to the output of the third register, and the output of the second multiplexer connected to the second input of the adder;

a third multiplexer having first and second inputs and an output, the first input of the third multiplexer connected to the setup engine [[data]]output and the second input connected to the output of the adder, and the output of the third multiplexer connected to the input of the third register;

a fourth multiplexer having first and second inputs and an output, the first input connected to the output of the third register; and

a fourth register having an input connected to the output of the fourth multiplexer, and having an output connected to the second input of the second multiplexer, the output of the fourth register also connected to the second input of the fourth multiplexer.

7. (currently amended): The system according to claim 6, wherein the third register stores a data value for the current pixel, and wherein the fourth register stores a data value for a next pixel that is inside the [[triangle]]graphic primitive.

8. (currently amended): The system according to claim 6, wherein the data value for the current pixel is one of a color value and a texture value, and wherein the data value for the next pixel is one of a color value and a texture value.

9. (canceled)

10. (currently amended): The method according to claim 20, wherein the method further includes performing [[performs]]block mode scanning.

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11. (currently amended): The method according to claim 20, wherein the graphic primitive is a triangle, and wherein the representative values of the ~~graphic~~ primitive are at least one edge function of the triangle and slope values for an x and y position ~~at least one vertex~~ of the triangle.

12. (currently amended): The method according to claim 20, wherein the graphic primitive is a triangle, and wherein the representative values of the graphic primitive are at least one edge function of a longest side of the triangle and slope values for an x and y position ~~at least one vertex~~ of the triangle.

13. (canceled)

14. (canceled)

15. (canceled)

16. (canceled)

17. (currently amended): A system for traversing and rendering a graphic primitive, comprising:

a setup engine that outputs representative values of a graphic primitive including edge functions of the graphic primitive; [[and]]

a raster engine that receives the representative values of the graphic primitive and wherein the raster engine forms therefrom representative pixels, the raster engine having at least a scan module and a look-ahead module; and

wherein the scan module successively scans a current pixel previously identified as being within the graphic primitive by the look-ahead module while the look-ahead module successively processes a next pixel using the edge functions and determines if the next pixel is within the graphic primitive.

~~that scans only pixels within the graphic primitive and assigns data values to each of the pixels and a look-ahead module that identifies pixels that are inside of the primitive;~~

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wherein the look-ahead module processes successive pixels one at a time using edge functions to determine whether a next pixel is within the graphic primitive; and

wherein the scan module scans a pixel previously identified as being within the graphic primitive while the look-ahead module processes the next pixel.

18.   (currently amended): The system according to claim 17, wherein each edge function is associated with one particular edge of the graphic primitive and determines whether or not the next pixel in the horizontal direction is within the graphic primitive with respect to the one particular edge.

19.   (currently amended): The system according to claim 18, wherein the look-up module uses at least one edge function to determine whether the next pixel is within the graphic primitive.each edge function returns a positive result if the next pixel is within the graphic primitive with respect to the one particular edge.

20.   (currently amended): A method in a graphics system for traversing and rendering a graphic primitive, comprising:

determining [[ ]]representative values of [[a]]the graphic primitive; and

successively determining[[, successively,]] from the representative values of the graphic primitive data values for a current[[each]] pixel of a set of pixels that [[are]]is previously identified as being within [[inside of]]the [[triangle]]graphic primitive, while successively and, for each current pixel of the set of pixels inside of the triangle, looking ahead to a next adjacent pixel to determined determine if the next adjacent pixel is [[inside of]]within the [[triangle]]graphic primitive using edge functions and[[;]]

storing a characteristic value for the next adjacent pixel when the next adjacent pixel is [[inside]]within the [[triangle]]graphic primitive.[[; and]]

scanning the current pixel while looking ahead to a next adjacent pixel to determined using edge functions if the next adjacent pixel is inside of the triangle.

21.   (currently amended): A graphics system, comprising:

at least one graphic triangular primitive;

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a first module that generates edge functions for [[the]]a triangular graphic primitive, wherein the first module further ~~and that provides indication of~~ indicates which of the edge functions corresponds to a longest side of the triangular graphic primitive, and further [[that]] provides starting coordinates for the triangular graphic primitive[[;]]and

a second module that forms pixels using the edge functions of the triangular graphic primitive and that provides at least one data value for each current pixel previously identified as being within the triangular graphic primitive[[;]] while [[and]]

a third module [[that,]] successively[[,]] ~~from a successive current pixel,~~ determines if a next pixel is within the triangular graphic primitive, and stores ~~the third module only storing~~ [[a]]at least one data value of the next pixel when the next pixel is inside of the triangular graphic primitive.